Hawai‘i Sea Grant 2012 NSGO Review

Michael Liffmann

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HI SG Management

E. Gordon Grau—Director (1.0 FTE leverage)

Darren Lerner- Associate Director (1.0 FTE leverage)

Bruce Hamakawa- Fiscal Officer (1.0 FTE leverage)

Darren Okimoto- Extension Leader (1.0 FTE leverage)

Cindy Knapman-Communications Leader (0.5 FTE SG & 0.5 FTE leverage)

Large program

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HI SG Management

Functional Area	# of individuals	# of FTEs supported by SG	# of FTEs supported by match/leverage
Mgt/Admin	10	4.50	5.30
Communications	4	2.50	1.00
Extension	34	3.39	23.75
Education	27	10.00	6.25
Research	28	0.0	3.46

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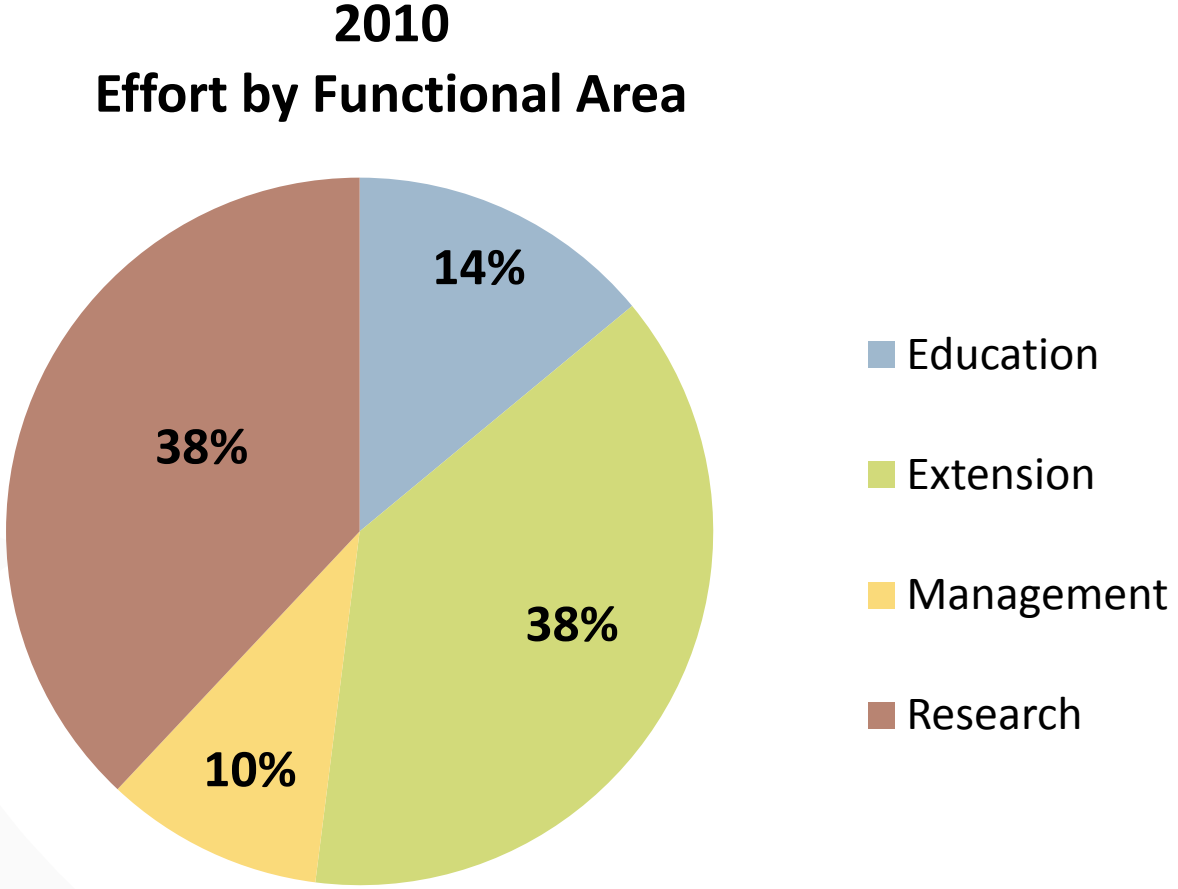
HI SG 2010
(Core Budget + Match)/Functional Area



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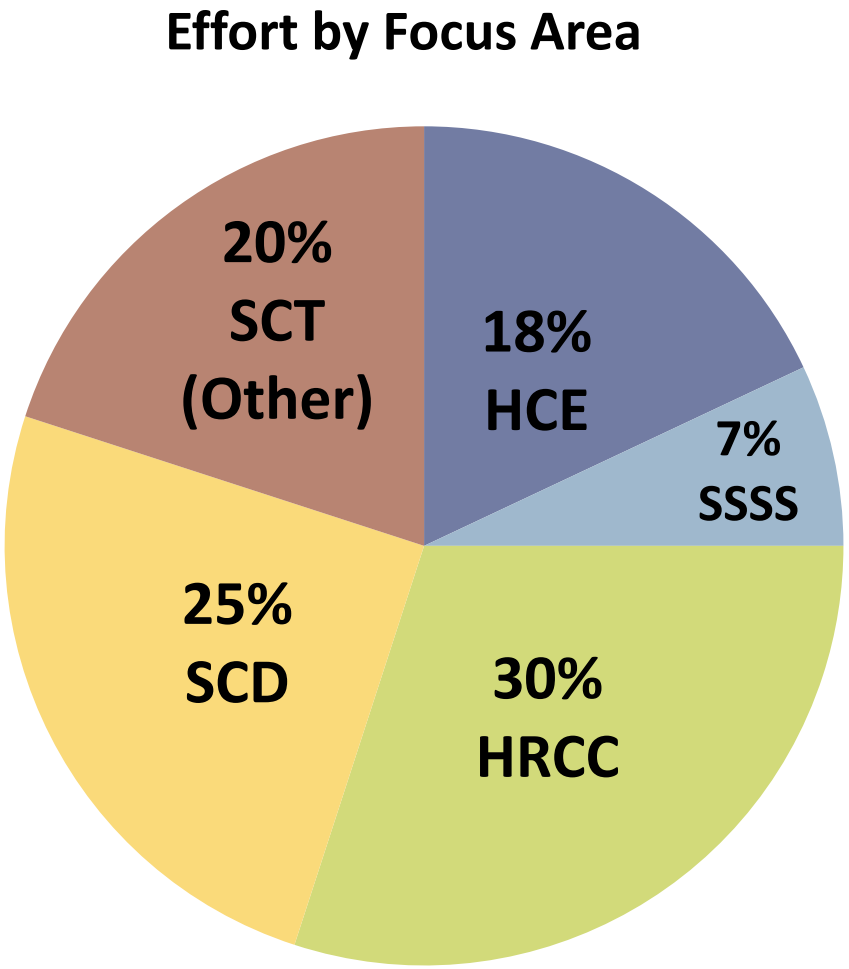
HI SG 2010 Total Budget/Focus Area



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Significant HI SG Changes

- New Program Officer
- Awarded lead in campus-wide sustainability cluster hire initiative providing five new faculty each with 0.25 FTE positions (leverage) allocated to HI SG.
- Hosting NOAA Coastal Storms Program for the Pacific Region: 2012 RFP to award $1 million in small grants

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HI SG Program RFP Process

- For the 2012-14 biennium, RFP issued December 1, 2010. Distributed to all departments at UH Mānoa and all other universities in HI. Widespread notification of current and past researchers.
- 70 preliminary proposals received. Access via eProjects provided to appropriate extension faculty, peer reviewers, the Sea Grant Advisory Council , and the Science Panel. Considered the scientific merit of the preliminary proposals, the Advisory Council provided feedback on the need and relevance of the projects to Hawai‘i, and the Science Panel considered the scientific merit while incorporating the reviews conducted by the peer reviewers and the Advisory Council resulting in a directive on which proposals to advance to the full proposal stage.
- 42 invited to submit full proposals. 40 proposals received by June 28, 2011. Peer reviews by national and international leaders of the respective fields via eProjects.
- An external Science Panel reviewed peer recommendations and made its own assessment and recommendation to HI SG management.
- 17 proposals recommended and included in 2012-14 Omnibus proposal.

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HI SG 2012-2013 RFP Process Projects – Research Metrics

Core Proposals	# of Proposals	# of institutions	# from home institution
Pre-proposals submitted	70	12	55
Full proposals submitted	42	5	36
Proposals Funded	17	2	16

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HISG- Contribution to National Performance Measures and Metrics

Focus Area	Metric/Performance Measure	Actual
HCE	Number of coastal communities whose residents are actively engaged in organized ecosystem based stewardship as a result of Sea Grant activities.	25
SCD	Number of coastal communities who have been provided the information, tools or technologies to adopt/implement sustainable - economic or environmental - development practices or policies as a result of Sea Grant activities.	19
SSSS	Number of aquaculture stakeholders who adopt and implement responsible, sustainable aquaculture practices.	33
HRCC	Number of coastal communities who adopt/implement hazard resiliency practices to prepare for and respond to/minimize coastal hazardous events.	20

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HI SG IMPACTS

FOCUS AREA: HRCC

Goal: Widespread understanding of the risks associated with living, working, and doing business along the nation's coasts.

HI SG Research Develops Three-dimensional Model of Tsunami Generation and Near-field Characteristics

- **RELEVANCE: NEOWAVE is setting a new standard for tsunami inundation mapping and is being used by an international community of scientists for tsunami research and hazard mitigation.**
- **RESPONSE: After winning the 2009 Benchmark Challenge at Oregon State University, the tsunami model NEOWAVE has received worldwide attention.**
- **RESULTS: Hawaii, Puerto Rico, American Samoa, and the Gulf coast states have adopted NEOWAVE as the standard model for tsunami inundation mapping under the National Tsunami Hazard Mitigation Program. Chile has adopted NEOWAVE as the national standard for tsunami inundation mapping.**

  A visiting professor from Korea Maritime University and a Fulbright Scholar from the University of Canterbury are currently conducting tsunami research at UH with the intention of adopting NEOWAVE at their respective institutions. UNESCO International Tsunami Information Center is planning to assist with its distribution.

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HI SG Impacts

FOCUS AREAS: HRCC and SCD

Goal: Community capacity to prepare for and respond to hazardous events

HI SG Center for Island Climate Adaptation and Policy (ICAP) helps mainstream climate adaptation measures into state agency plans and policies.

- **RELEVANCE: Several state agencies are concerned with how climate change will affect their decision-making and ability to carry out mandates.**
- **RESPONSE: Some agencies have turned to ICAP for assistance with the early stages of adaptation planning. For example, ICAP serves an advisory role for an island-wide pilot climate change vulnerability assessment for the transportation sector on Oahu led by the Oahu Metropolitan Planning Organization (Oahu MPO). ICAP also assisted the State Department of Natural Resources, Division of Forestry and Wildlife (DLNR DOFAW) in March 2010 to prepare the climate change portion of their Statewide Assessment of Forest Conditions and Resource Strategy.**
- **RESULTS: Climate scientists, social scientists, engineers, and a broad range of transportation managers and planners have explored the effects of a changing climate on HI's transportation infrastructure and prioritized assets for closer examination in the initial vulnerability assessment. For DLNR DOFAW, the statewide forestry assessment and planning document will guide all of the division's activities that receive federal funding over the next five years. DLNR DOFAW is preparing adaptation strategies that address ecosystem monitoring, vulnerability assessment, and a reiterative process for adaptation planning.**

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HI SG IMPACTS

FOCUS AREA: SSSS

Goal: A healthy domestic seafood industry that harvests, produces, processes, and markets seafood responsibly and efficiently

HI SG Extension continues supporting County of Maui in developing safe and sustainable food production systems

- **RELEVANCE: With exorbitant living expenses, most local residents in Maui County pay a high price for living in paradise. This is an especially difficult burden for many families who live close to or below the poverty line, including a number of Native Hawaiians.**
- **RESPONSE: In collaboration with UH Maui College and UH College of Tropical Agriculture and Human Resources, HI SG conducted aquaponics, bivalve culture, water quality and Chinese Catfish spawning workshops and demonstration projects.**
- **RESULTS: Twelve new aquaponics systems were constructed, ranging from small backyard systems to two large commercial ones. The backyard operations have allowed working families to supplement their income and eat fresh and safe seafood, herbs and vegetables. At the Maui County Farmfest hundreds of school children and more than 1,500 residents and visitors were exposed to small-scale food production.**

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HI SG RESEARCH ACCOMPLISHMENT

Ocean Acidification: Impacts on Calcification and Carbonate Mineral Dissolution on the Barrier Reef of Kaneohe Bay, Hawaii

- **Determined integrated fluxes of CO2 between the ocean and atmosphere (over the past five years) at two locations in Kaneohe Bay and since 2008 on the south shore of Oahu. The results (fluxes) represent the first high resolution time series data for coral reef systems derived from autonomous measurements rather than from synoptic sampling.**

- **Developed the first characterization of the extreme high temporal frequency variability of CO2 fluxes between the ocean and atmosphere in coral reef environments under a variety of conditions. Quantified diel cycles of calcification/carbonate dissolution across the barrier reef of Kaneohe Bay.**

- **Graduated one student with MS in Oceanography (2010); trained three undergraduate students in field sampling and servicing of instrumentation used in this project; sponsored training of three graduate students in scientific diving.**

- **Delivered public outreach presentations on greenhouse gases using project results and Kaneohe Bay as a case study.**

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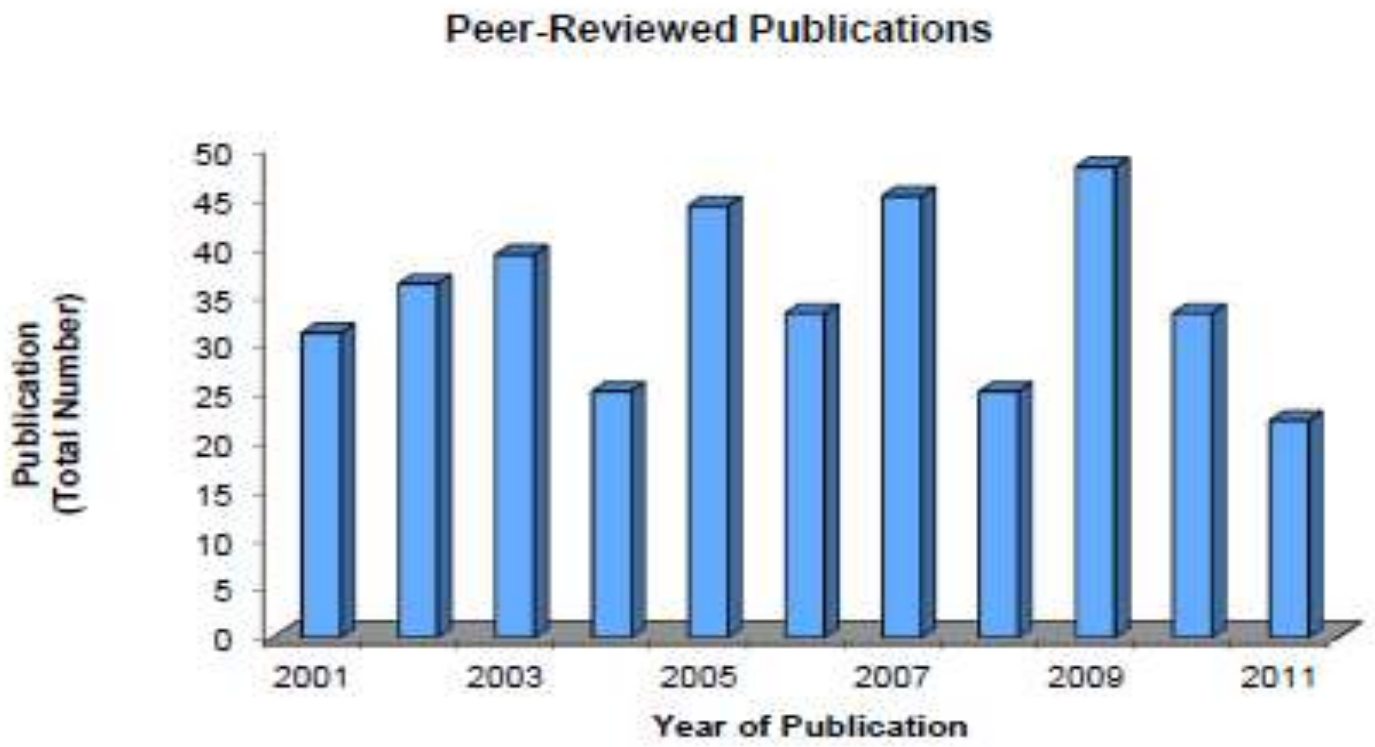
HI SG Research Accomplishments



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Sources

- Planning, Implementation, and Evaluation Resources (PIER) https://pier.seagrant.noaa.gov
- Personal Communication with HI SG Program
- Website
- Omnibus proposal 2012-2013
- Site Review Briefing Book and report

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